CONTAINER AND DISPENSER
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This invention relates to a container and dispenser and more particularly to a type of box or carton used in the packaging, storing and dispensing of goods.

One type of conventional container for soaps, baby cereals, and the like is a generally rectangular box with a perforated tab on the top or side thereof. In opening the box the tab is punched out leaving an opening directly into the container and the contents therein. Once the tab is punched it will not refill flush and therefore the contents are somewhat exposed. The present invention provides a tab or tongue with fitted insert or plug in a particular arrangement of a better closure. In addition, such conventional containers have an unsatisfactory arrangement for dispensing which arrangement is improved upon by the present invention.

A particular object of the present invention is to improve over those cartons or packages which merely provide a partially uncovered punched opening directly into the contents of the container when after punching the tab the interior of the container is at least partially exposed permitting foreign ingredients such as dirt and bugs to enter into the remainder of the contents. The container of the present invention provides a novel blank from which the package is constructed as well as a new and different dispenser arrangement.

An additional object of the present invention resides in the formation of an angularly disposed pouring area whereby greater control of the contents is maintained during pouring and a greater volume is available in less time.

Another advantage of the instant invention is found in the tight closure which is readily positioned after dispensing and in the simplicity of formation of the closure lending the structure to inexpensive manufacture.

Briefly described, the present invention comprises a normally closed container having top, bottom, side, and end walls with a top wall having an opening formed therein and with one or more of said walls having a tongue formed thereon, said tongue having a plug fixed thereon so that movement of the tongue carries the plug from the opening. As one preferred form of manufacture, the walls are formed by bending along fold lines on a flat blank and the plug and tongue are formed separately by partial cutting on the flat surface. When folded in place in a particular manner the various parts readily assume their positions. In addition, one corner of each of the opposed sides may be angularly cut to provide an angular support for the corner of the container for the plug and tongue thereby providing a better pouring area. Of course, the individual features may be formed from other than a flat blank.

Other and further objects and advantages will be apparent from the following description taken in conjunction with the accompanying drawings in which:

Fig. 1 is a pictorial view of the container prior to opening with the dispenser in initial fixed position.

Fig. 2 is another pictorial view with parts of the container moved out of normal position for an illustration.

Fig. 3 is a front end elevation view of the device of Fig. 1, with the tongue broken out of position.

Fig. 4 is an elevation view illustrating the blank from which the container may be formed as well as illustrating an intermediate stage of forming.

Fig. 5 is a plan view of the flat blank from which the container may be formed.

Fig. 6 is a section view taken along lines 5—5 of Fig. 3. Referring to the drawings and initially Figs. 1 to 4, inclusive, thereof, for a description of the assembled container comprising side walls 10 and 12, a top wall 14, a bottom wall 16, a front end wall 18, a rear end wall 20 forming a normally closed, substantially rectangular container.

The opposed side walls, 10 and 12, are angularly cut across the respective upper corners 22, 24 thereof forming an angularly disposed surface at one corner of the container. The top wall 14 extends adjacent the angled corner into a base flap 26 which bends out of the plane of the top 14 assuming the angle of the corner and lying across the opposed sides 22, 24 of the sides 10, 12. Prior to opening the container, the base flap 26 has a plug 28 perforated or otherwise partially cut therefrom and being retained in place by only a slight junction with the base flap 26 so that a slight pull will remove the plug from the base flap 26 leaving a complementary opening. In addition, base flap 26 is provided with side tabs 30, 32 glued or otherwise fixed to a respective side 10, 12 to anchor the base flap 26 firmly in place.

The end wall 18 extends at the top thereof to form an outer flap 34 which bends out of the plane of the end wall 18 to become coextensive with and lie on top of the base flap 26. With this arrangement, there are two plies of material at the angled corner. The outer flap 34 has a tongue 36 perforated or partially cut thereon so that, in manner similar to the plug 28, a slight pull on the tongue 36 will remove it from the outer flap 34 leaving a contacted, complementary opening. Tongue 36 includes a circular portion 38 at the upper end thereof and to assist in the removal of tongue 36 the portion 38 has been cut across at the top 40 leaving a fingernail slot. With the base flap 26 fixed on opposed sides 10, 12 the outer flap 34 is glued or otherwise fixed to the base flap 26 with the exception of the tongue 36 which is free to pivot.

The partially unfolded container of Fig. 4 illustrates the manner of forming the closed container from the flat blank shown in Fig. 5. By referring to the blank of Fig. 5 thence to the other figures it will be clear how one preferred embodiment of the invention is constructed and assembled. Side walls 10, 12 are formed to fold about respective fold lines 42, 44 leaving one end (the rear) 20 therebetween. End 20 extends at the top to form top flap 14 and top flap 14 extends further to form base flap 26. End 20 in turn extends at the bottom to form a bottom closure tab 45. Side wall 10 extends to form top and bottom closure tabs 46, 48, respectively, and side wall 12 extends in like manner to form top and bottom closure tabs 58, 59. End wall 18 is a continuation of the side of side wall 12 being formed about a fold line 54. The top of end wall 18 extends to form the outer flap 34 while the bottom extends to form a bottom closure tab 56. End wall 18 also extends at its side to form a sealing tab 58. The blank is stamped or cut from a flat sheet of material and either during or after the stamping, the plug 28 is partially cut on base flap 26 and the tongue is partially cut on the outer flap 34.
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Bringing the various parts together about their fold lines in the manner of Fig. 4, it is seen that the top closure and the top flap 14 extends over both of them where it is glued in place. In like manner, the bottom closure tabs 48, 52 overlap from the sides forming the exposed bottom while the bottom closure tabs 45, 56 overlap from the ends forming the inner bottom. Sealing tab 58 folds inside at the marginal edge of the intersection of side 10 and end 18 and is glued or otherwise fixed in place to seal the edge and hold end 18 in place. Base flap 26 is, as mentioned heretofore, folded in position against the angled edges of sides 10, 12 at 22, 24, respectively, and tabs 30, 32 are folded and glued in place on a respective side 10, 12. Prior to the positioning of the outer flap 34, some bonding material such as glue is spread outside the confines of tongue 36, approximately as shown in the hatched lines of Fig. 4, and a small dab is placed on the circular portion 38. When the outer flap 34 is pressed in place on top of base flap 26, the pouring area defined on the outer surface is sealed and the tongue becomes fixed to the plug 28. Bending the tongue 36 out of its normal position, which is flush with the outer flap 34, breaks the plug 28 from the base flap 26 and leaves a complete opening through which the contents of the container may be poured.

In positioning the containers for filling, as where the containers would be formed and assembled in one place, the cover portion is sealed separately. After filling, all the sealing of the sides and edges may be completed except for the positioning and sealing of the base flap 26 and the outer flap 34 which may be left open and temporarily pulled back leaving an enlarged opening at the angular corner for filling. In shipping, all the container may be collapsed in the above condition until ready for expanding and filling under the mechanical means. After filling, the base flap 26 and the outer flap 34 are sealed or glued or otherwise fixed in position tightly sealing the contents in until the tongue 36 is broken out of position.

Once the seal is broken on the tongue 36 and only a part of the contents has been used, it is, of course, desirable to re-seal the container to protect the stored contents until again needed. Such re-seal is particularly easy and effective with the present invention since the tongue 36 and plug 28 are easily forced back into their complementary openings and pressure on the circular portion 38 of the tongue 36 against the base flap 26 will recur in the base flap 26 and the outer flap 34 which may be left open and temporarily pulled back leaving an enlarged opening at the angular corner for filling. In shipping, all the container may be collapsed in the above condition until ready for expanding and filling under the mechanical means. After filling, the base flap 26 and the outer flap 34 are sealed or glued or otherwise fixed in position tightly sealing the contents in until the tongue 36 is broken out of position.

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Since the circular portion 38 of tongue 36 is larger than the plug 28, the periphery of the plug opening is sealed when the tongue 36 and plug 28 are in closed position. This provides a double seal to the pouring area and assures protection from foreign ingredients entering the container in storage. In addition, the double seal enhances the tight fit of the contoured tongue with its complementary opening providing a strong engagement of the closure parts and accidental openings as by knocking over or dropping are greatly reduced.

The angular portion formed by the surfaces 22, 24 and flaps 26, 34 greatly facilitates the speed and control of containers entering from the container. Since there is no sharp corner at this point, the contents does not back up in the corner and block the emission of the rest of the contents. Tilting the container to the point where the outer flap 34 is horizontal brings the contents squarely against a flat surface on all sides of the opening thereby assuring a steady flow. Better control is available when an immediate cessation of pouring is desired since a slight tilt back to normal upright position brings the contents against a now backwardly inclined surface at 26 practically eliminating the unwanted last surge of contents which is present when using containers with a pouring surface formed on one of the flap sides.

Although for the purpose of illustration and in the interest of clarity, a preferred form of the container and blank has been shown and described in detail this is not to be construed as a limitation on the coverage of the invention as various modifications, changes, substitutions, alterations, and eliminations may be made within the scope of invention and without departing from the appended claims.

I claim:

1. In an article operable to form a normally closed container comprising, opposed flat side walls, opposed flat end walls, and opposed top and bottom walls with all intersecting corners thereof sealable to form a container having squared, perpendicular intersections on three corners thereof, said container being in opposed relationship and having the fourth corner thereof diagonally cut in alignment forming an angular support surface on the fourth corner of said container, at least one of said walls having extended portion thereof foldable about a hinge line thereof and sealingly attached thereto forming a closure thereof and providing another flat surface on said container which is smaller than the others, and a partially cut tongue on said closure adapted to be bent from its normal closed position to an opening at said angularly formed corner into the interior of said container, by virtue of all of which when tilting said container for pouring said angularly formed corner acts as a pouring area against the inside of which the contents of said container will naturally be directed thereby assisting a steady flow through said opening.

2. In an article operable to form a normally closed container comprising, opposed flat side walls, opposed flat end walls, and opposed top and bottom walls with all intersecting corners thereof sealable to form a container having squared, perpendicular intersections on three corners thereof, said container being in opposed relationship and having the fourth corner thereof diagonally cut in alignment forming an angular support surface on the fourth corner of said container, at least one of said walls having extended portion thereof foldable about a hinge line thereof and sealingly attached thereto forming a closure thereof and providing another flat surface on said container which is smaller than the others, and a partially cut tongue on said closure adapted to be bent from its normal closed position to an opening at said angularly formed corner into the interior of said container, by virtue of all of which when tilting said container for pouring said angularly formed corner acts as a pouring area against the inside of which the contents of said container will naturally be directed thereby assisting a steady flow through said opening.

3. In an article operable to form a normally closed container comprising, opposed flat side walls, opposed flat end walls, and opposed top and bottom walls with all intersecting corners thereof sealable to form a container having squared, perpendicular intersections on three corners thereof, said container being in opposed relationship and having the fourth corner thereof diagonally cut in alignment forming an angular support surface on the fourth corner of said container, at least one of said walls having extended portion thereof foldable about a hinge line thereof and sealingly attached thereto forming a closure thereof and providing another flat surface on said container which is smaller than the others, and a partially cut tongue on said closure adapted to be bent from its normal closed position to an opening at said angularly formed corner into the interior of said container, by virtue of all of which when tilting said container for pouring said angularly formed corner acts as a pouring area against the inside of which the contents of said container will naturally be directed thereby assisting a steady flow through said opening.

4. In an article operable to form a normally closed container comprising, opposed flat side walls, opposed flat end walls, and opposed top and bottom walls with all intersecting corners thereof sealable to form a container having squared, perpendicular intersections on three corners thereof, said container being in opposed relationship and having the fourth corner thereof diagonally cut in alignment forming an angular support surface on the fourth corner of said container, at least one of said walls having extended portion thereof foldable about a hinge line thereof and sealingly attached thereto forming a closure thereof and providing another flat surface on said container which is smaller than the others, and a partially cut tongue on said closure adapted to be bent from its normal closed position to an opening at said angularly formed corner into the interior of said container, by virtue of all of which when tilting said container for pouring said angularly formed corner acts as a pouring area against the inside of which the contents of said container will naturally be directed thereby assisting a steady flow through said opening.
plug is removed by the action of moving said tongue out of its plane and being thereafter re-insertable in the opening.

4. In an article of manufacture being a flat blank for bending to form a container, a center section having a first fold line at the upper end thereof and extending beyond said fold line to form a top flap, said top flap having a fold line thereon with a base flap extending therefrom, said base flap having a plug partially cut thereon, opposed side walls foldable about respective spaced fold lines on said center section and having upper, outer edges thereof cut at an angle so that when folded the sides are in opposed relationship forming an angular base for said base flap, said base flap and said angularly disposed sides forming a pouring section, a flap foldable from a portion of said blank and extending at the upper end thereof to form a tongue, said tongue in normal position when folded being adapted to overlie the base flap to complete said angularly disposed pouring section, said tongue having a portion thereof overlying said plug so that it may be attached thereto whereby movement of said tongue carries said plug out of position.

5. In an article of manufacture being a flat blank for bending about fold lines to form a container, a center section having a first fold line at the upper end thereof and extending beyond said fold line to form a top flap, said top flap having a fold line thereon with a base flap extending therefrom, said base flap having a plug partially cut thereon, opposed side members foldable about said center section and having upper, outer edges thereof cut at an angle so that when folded the side members are in opposed relationship forming an angularly disposed base for said base flap, said base flap and said angularly disposed sides forming a pouring section, an end wall foldable about a fold line defined on one side of one of said side members and extending at the upper end thereof for folding to form an outer flap, said outer flap in folded position being adapted to overlie said base flap to complete said angularly disposed pouring section, and a tongue partially cut on said outer flap, said tongue having a hinge line for bending out of its normal plane and having a portion thereof contacting said plug in folded, closed position.

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